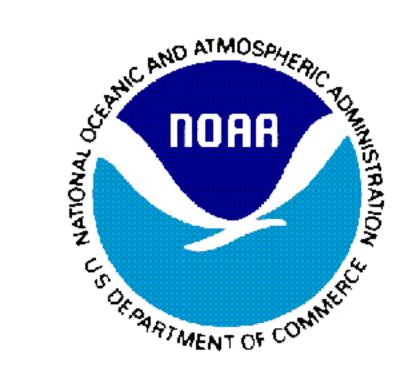
Overview of GOES Wildfire ABBA Fire Monitoring Activities and Applications



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Introduction

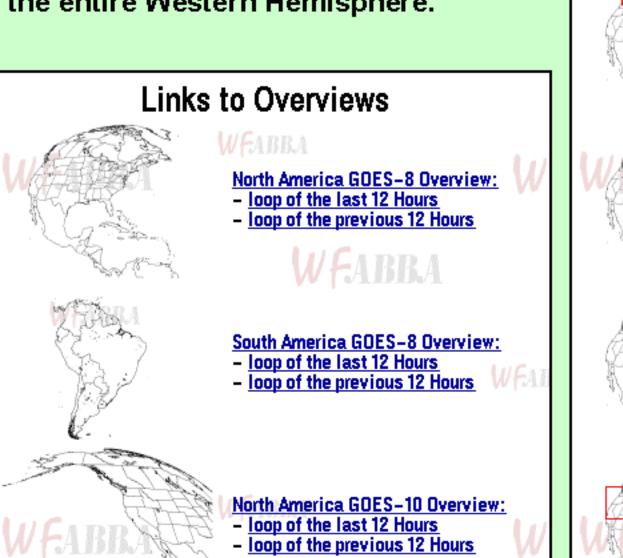
The need to systematically and reliably generate diurnal biomass burning information led to the development of the geostationary Wildfire Automated Biomass Burning Algorithm (WF_ABBA) processing system at UW-Madison CIMSS which was implemented in September 2000. With inputs consisting of GOES multispectral satellite data, total precipitable water from a numerical forecast model, and an ecosystem map, the WF_ABBA is able to detect and characterize fires in near real-time, providing half-hourly fire products for the Western Hemisphere.

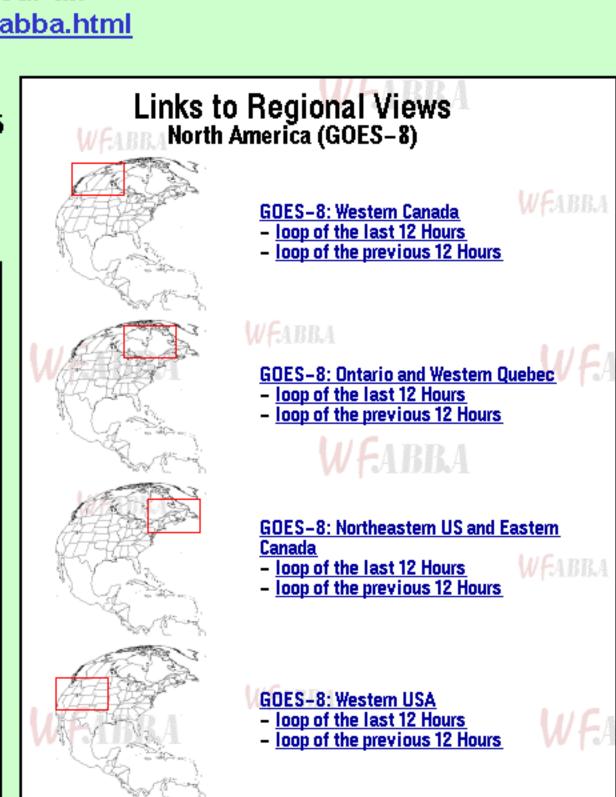
GOES WF_ABBA Output

Ouput includes alpha-blended imagery which are made available on the Internet within 90 minutes of the satellite observation time. The alpha-blended imagery consist of GOES visible and infrared data blended with an ecosystem map and the WF_ABBA fire product. ASCII product output files are placed on an anonymous ftp site. The output files contain fire pixel locations (lat./lon.), 3.9 and 10.7 µm brightness temperatures, instantaneous estimates of sub-pixel fire size and average temperature, ecosystem types, and fire flags.



anonymous ftp and the web every half-hour at: http://cimss.ssec.wisc.edu/goes/burn/wfabba.html Links to Regional Views
North America (GOES-8) Displays include three overviews and 35 regional views providing coverage of the entire Western Hemisphere.



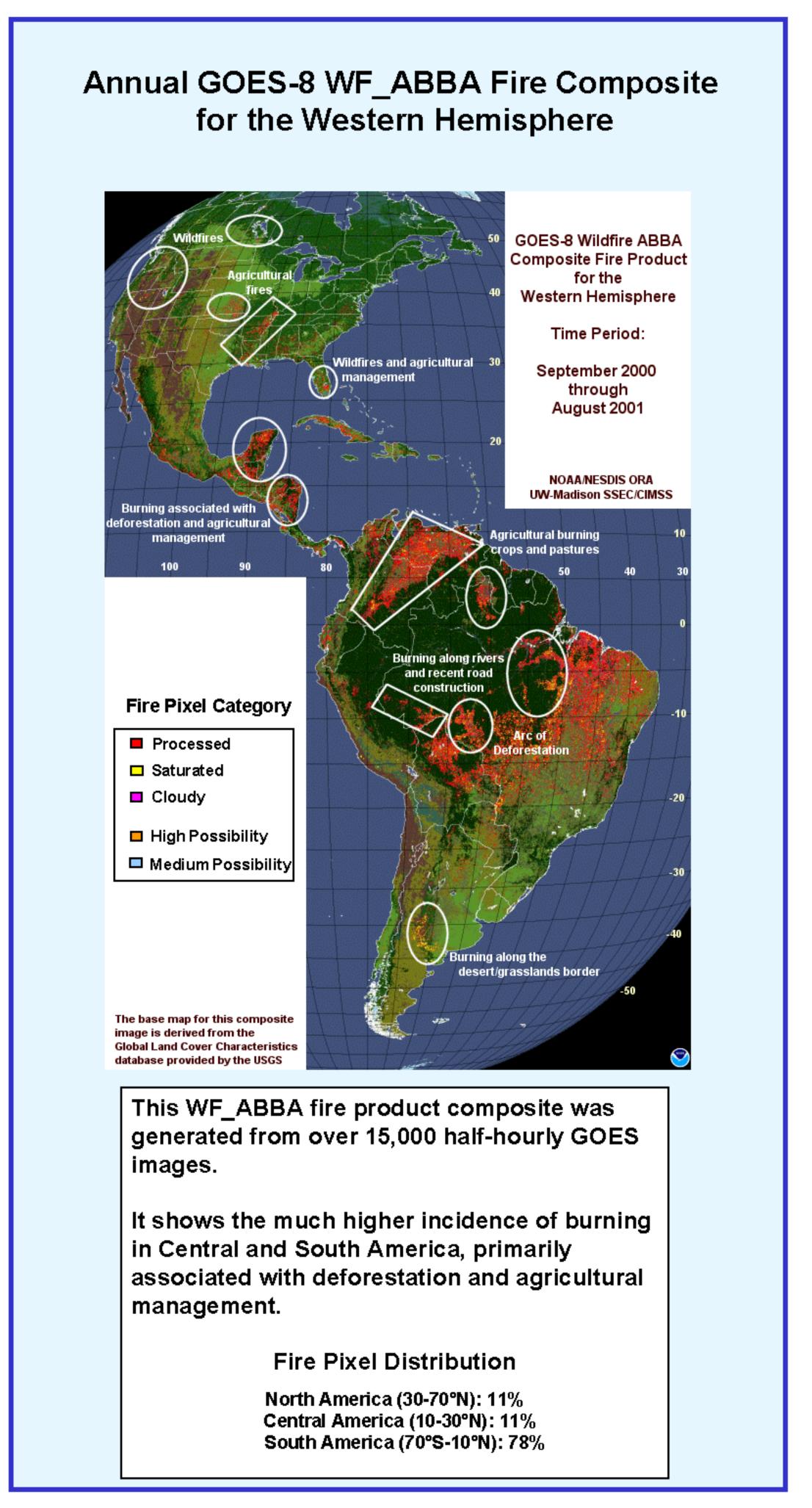


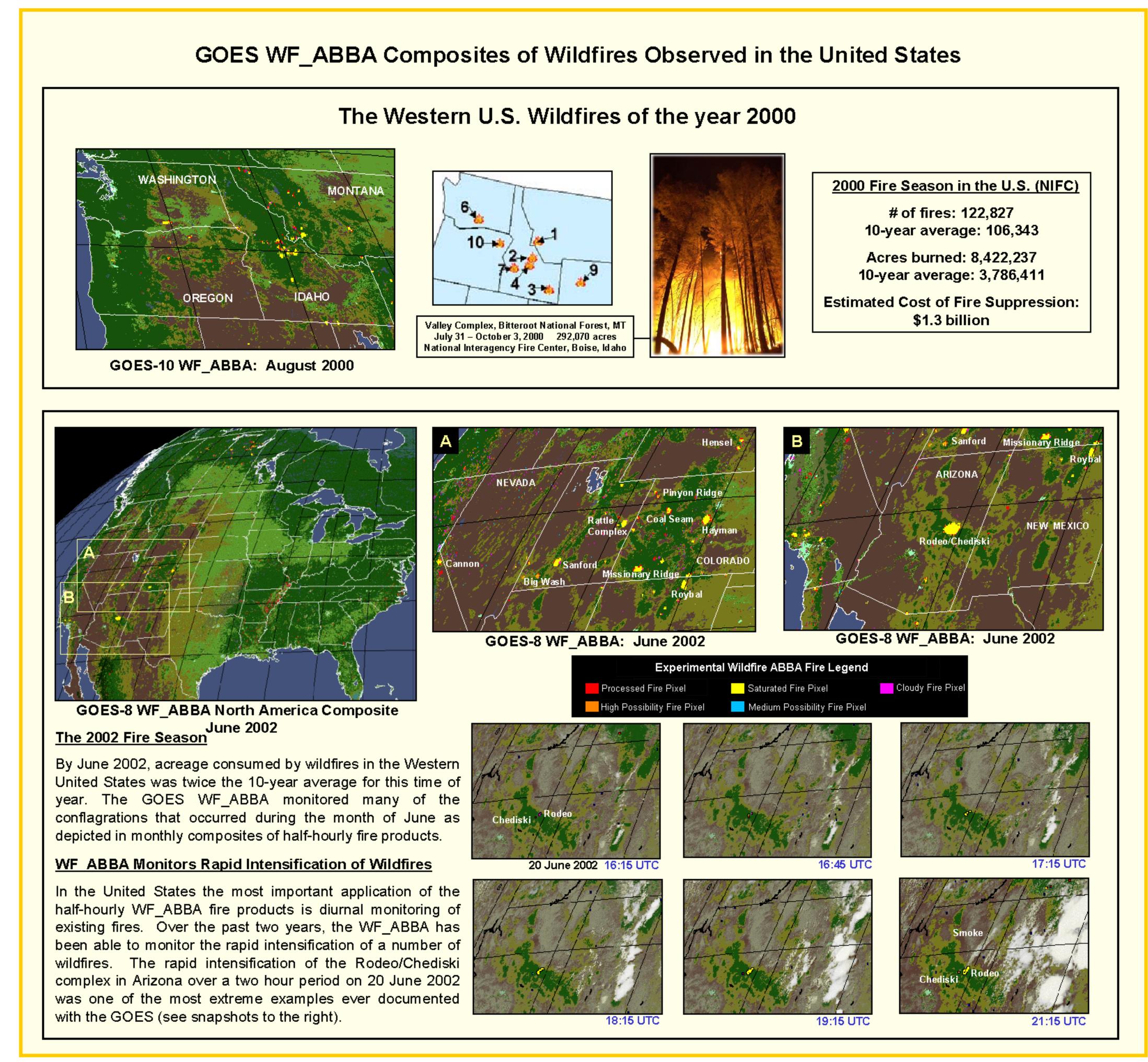
The User Community

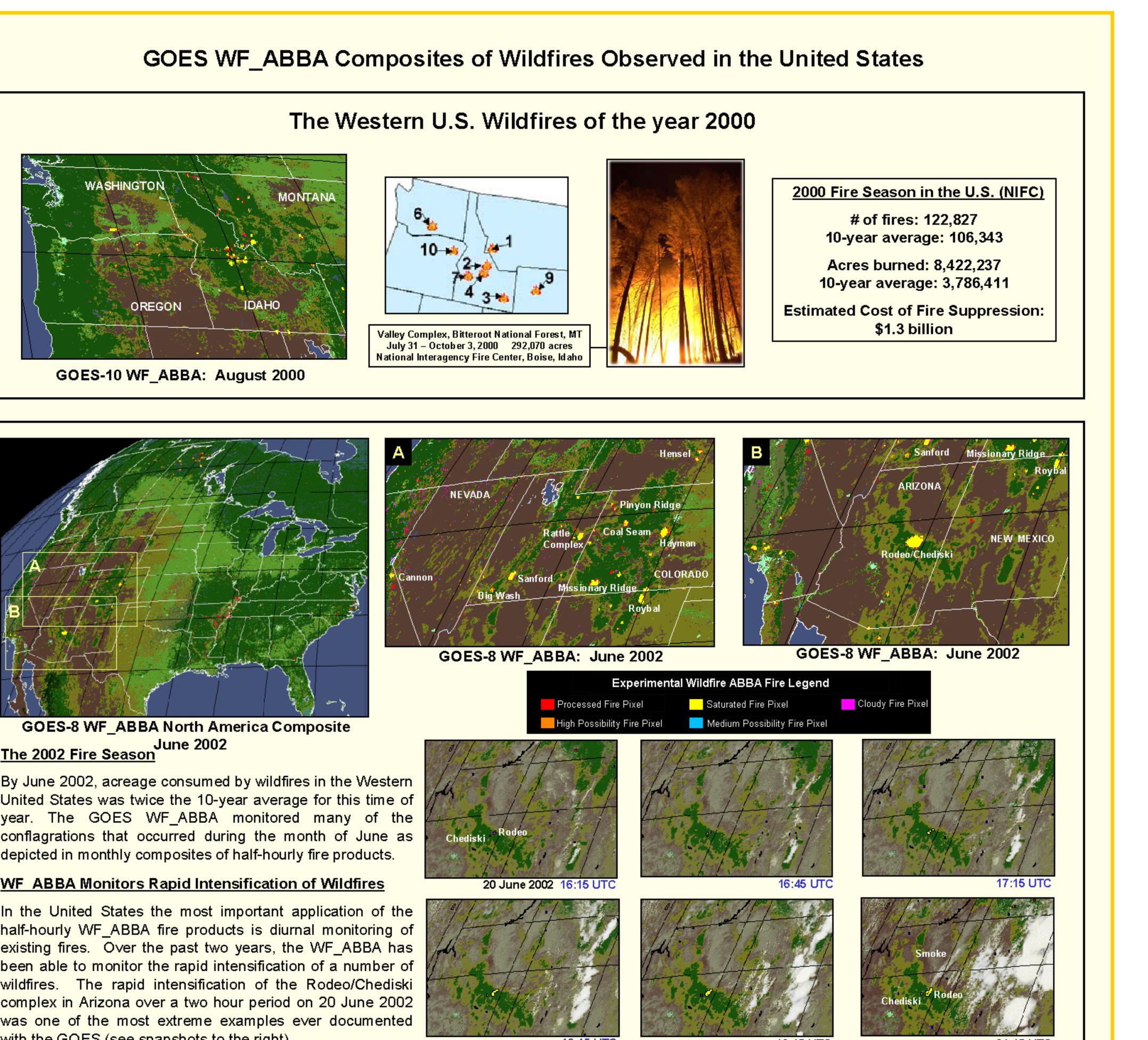
The user community includes climate change scientists, the aerosol and trace gas transport modeling community, the land-use and land-cover change detection research community, government agencies (such as NOAA, NASA), resource managers, fire managers, international policy and decision makers, educational institutions (such as the National Zoo, the UW-Madison Why Files, and The Exploratorium in San Francisco), and the general public.

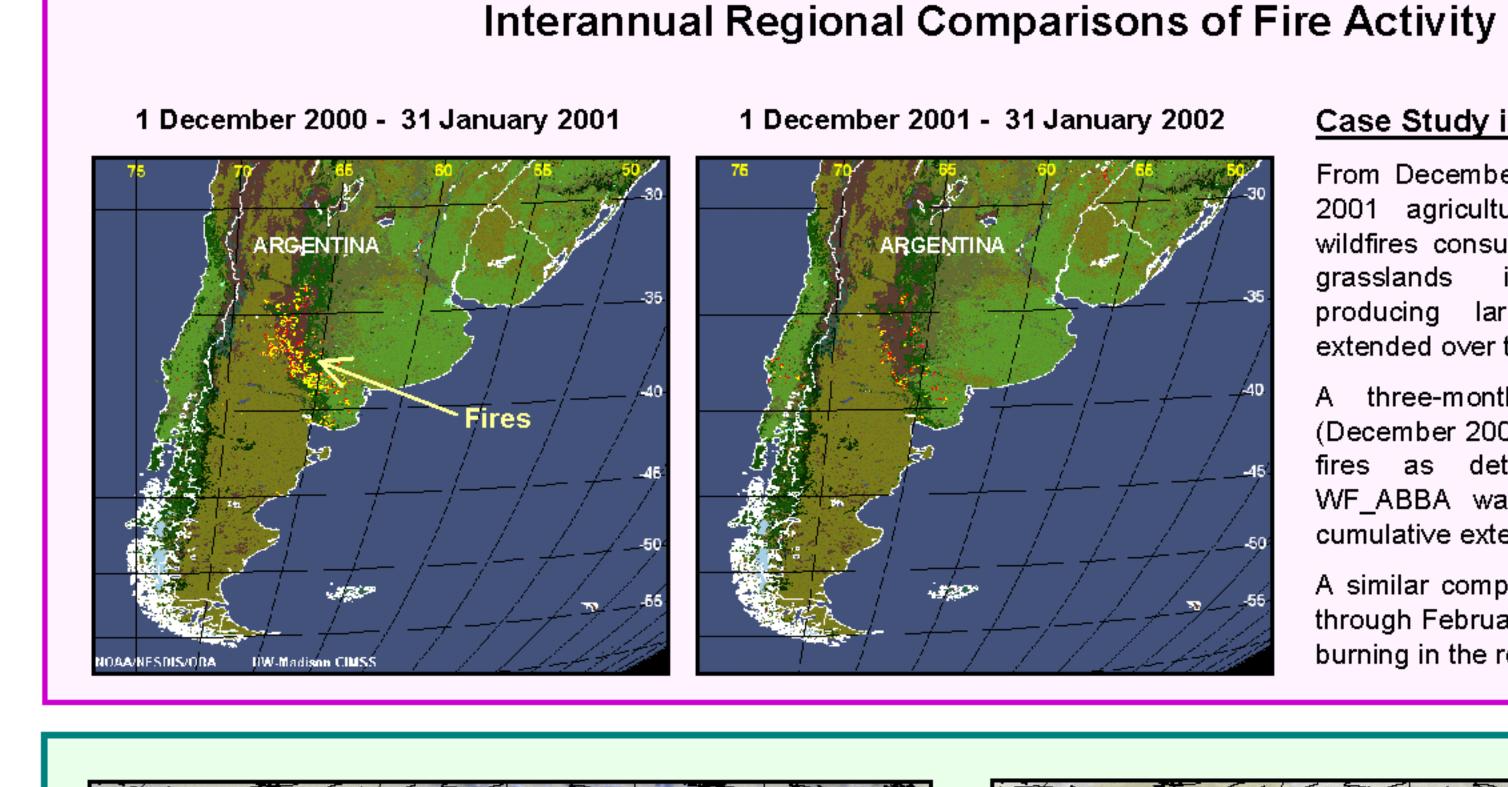
Acknowledgments: This work is supported with base funding provided by NASA's Earth Science Enterprise Interdisciplinary Science Program through Navy subcontract No. N66001-00-C-0039. It is also supported by NOAA grant NA07EC0676 and contract 40AANE1A4073. We gratefully acknowledge our many collaborators as cited throughout the poster.

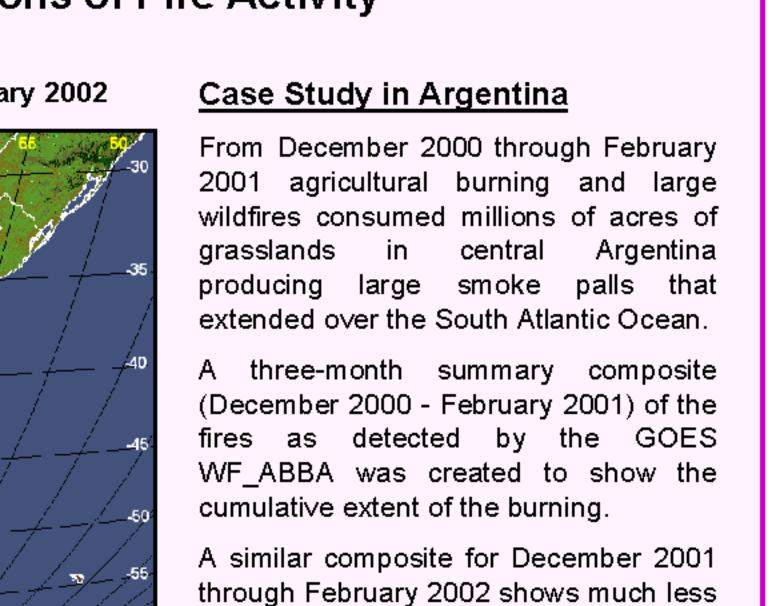
Examples of GOES Wildfire ABBA Active Fire Monitoring in the Western Hemisphere



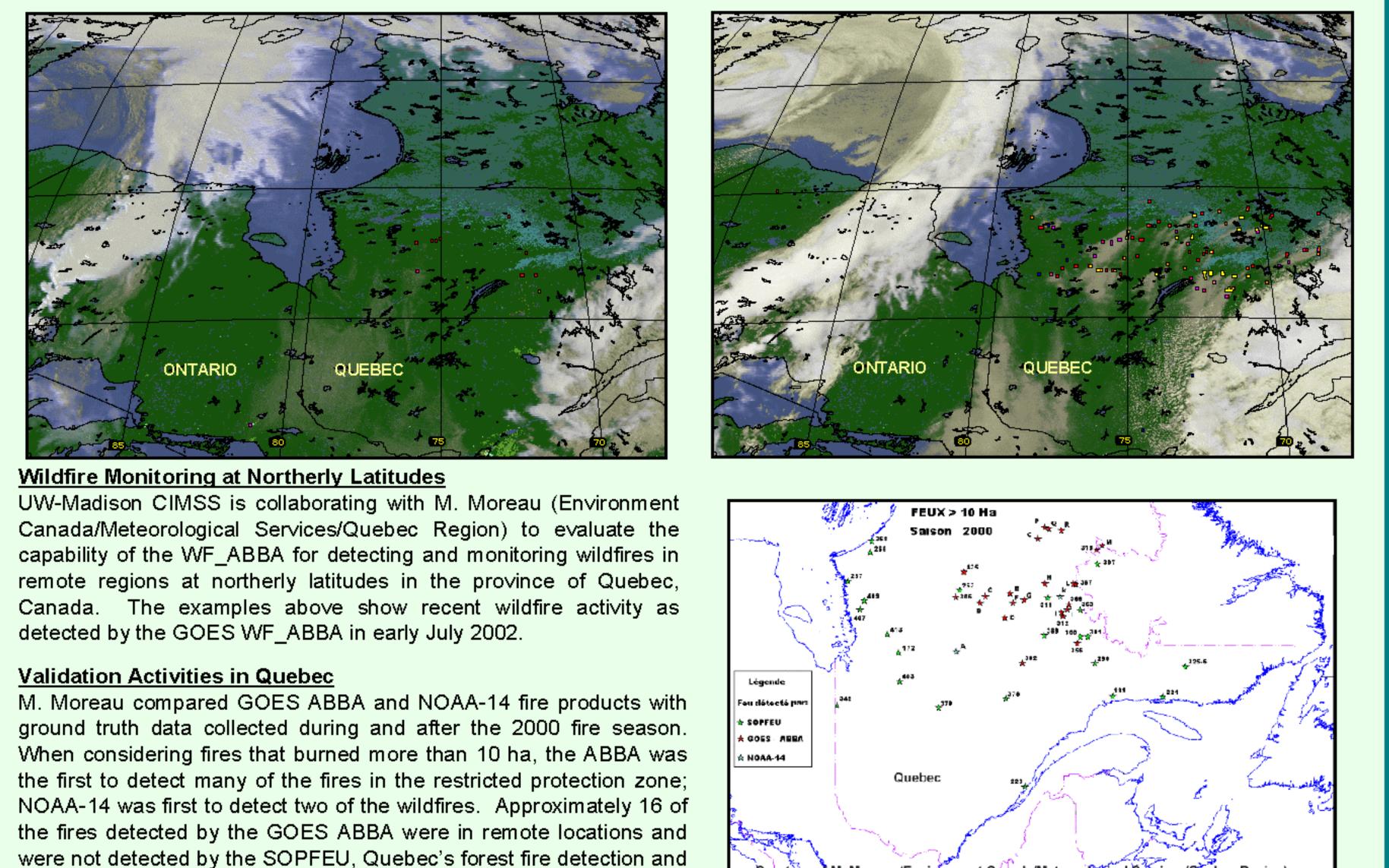




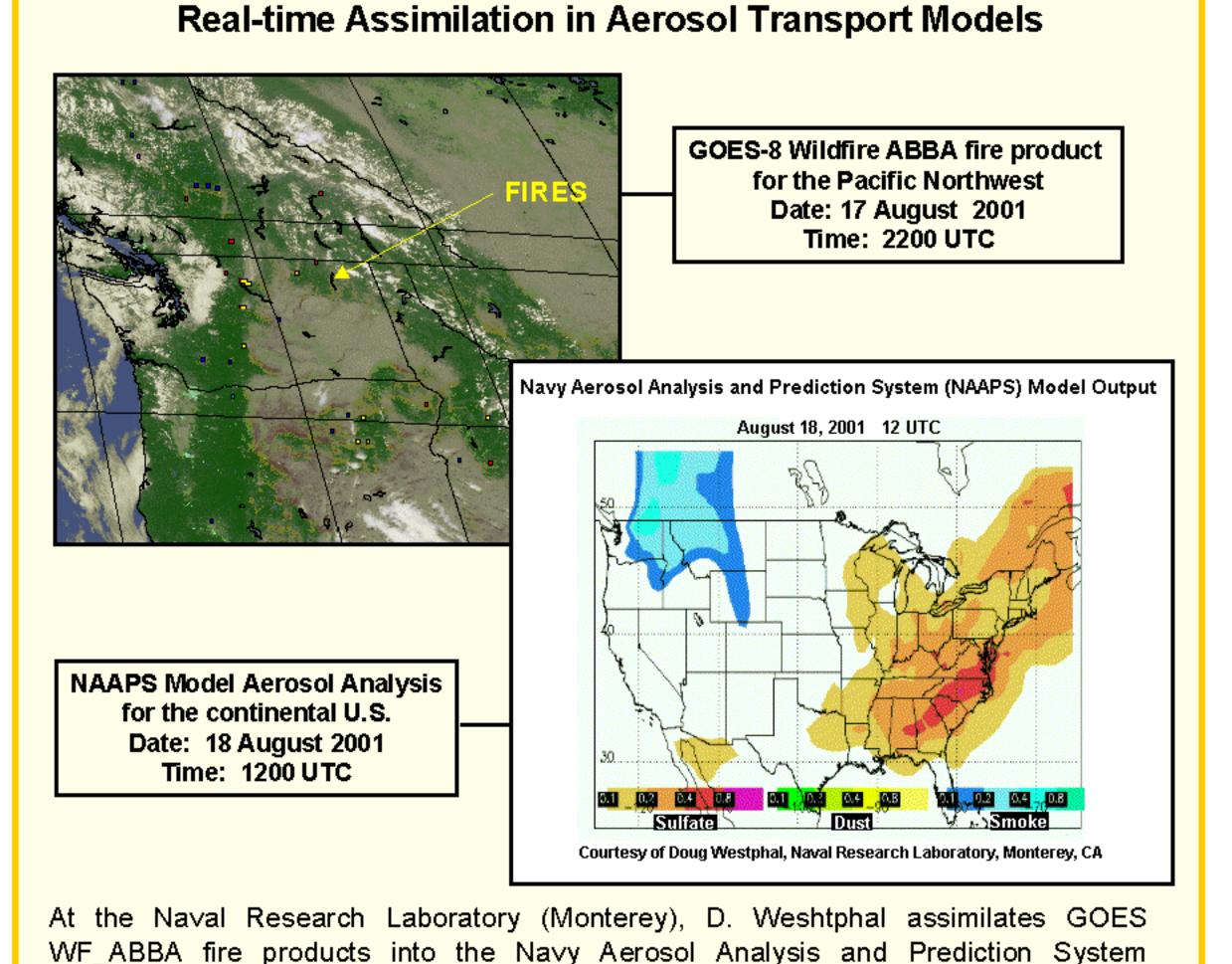




burning in the region.





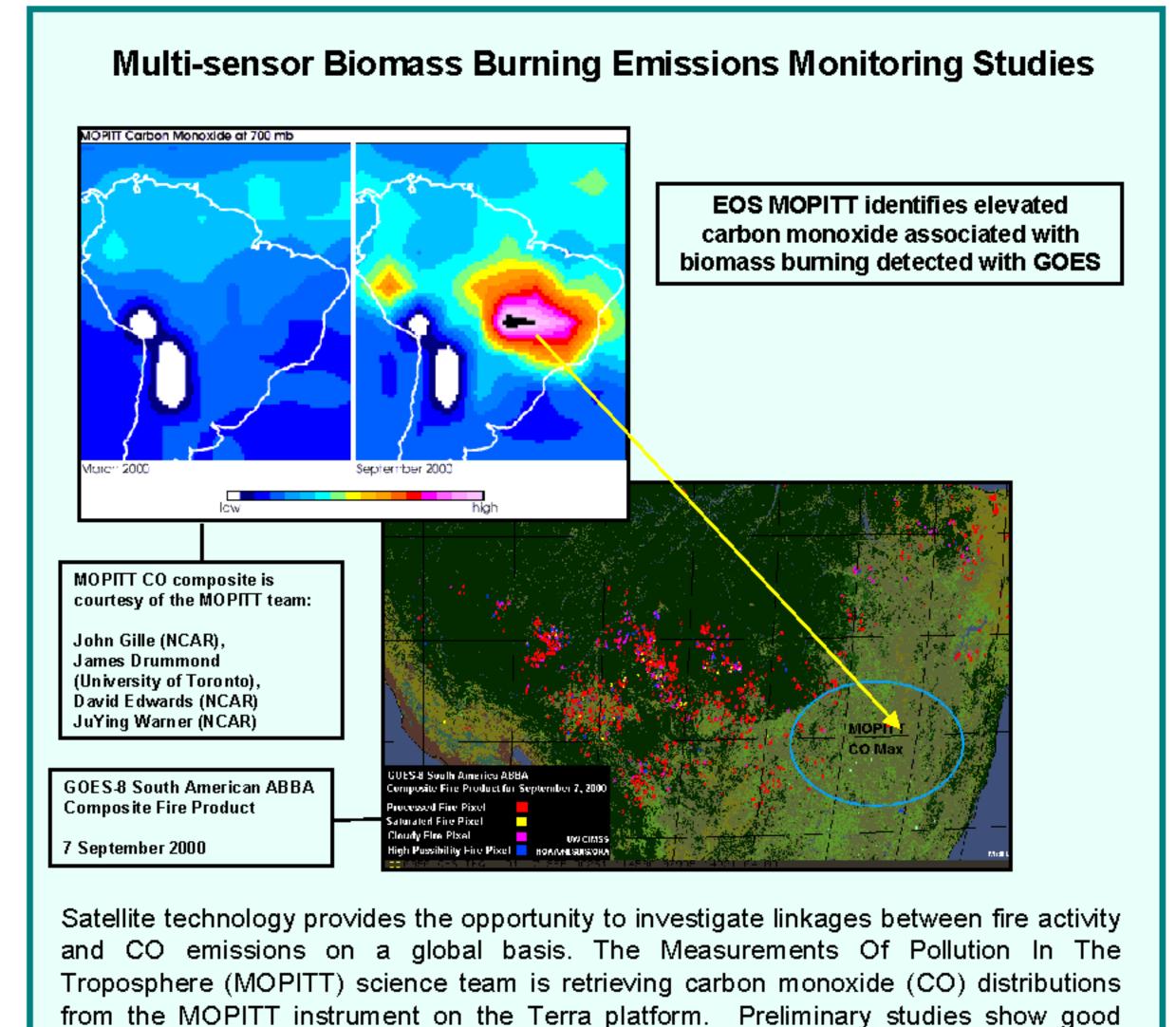


(NAAPS) in real time to analyze and predict aerosol extent, loading, and transport

regimes. An example is shown from August 2001 when the NAAPS successfully

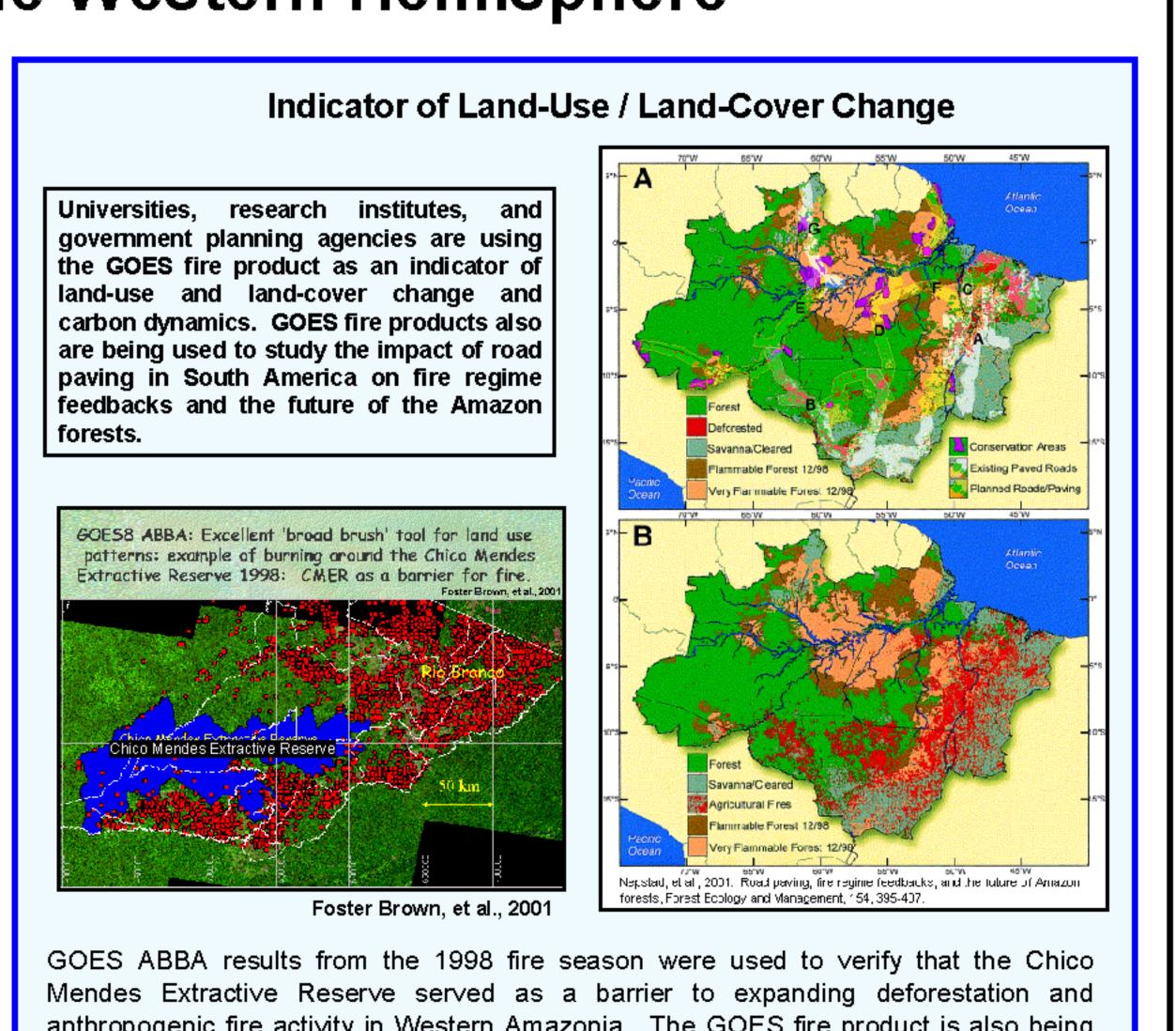
documented a large smoke pall that extended north into Canada and south over the

plains of Montana.



agreement between large biomass burning events as detected by GOES and regions of

elevated MOPITT derived CO values.



prevention agency

anthropogenic fire activity in Western Amazonia. The GOES fire product is also being used to study the relationship between new road construction and the expansion of fire activity in South America.

